IN THE CLAIMS:

Please amend the claims to read as follows:

1-111. (Cancelled)

112. (Currently Amended) A method of determining susceptibility of a HCV (hepatitis C virus) viral population in a patient for an HCV anti-viral drug, comprising:

    (a)   culturing a sample of host cells in the presence of the HCV anti-viral drug, wherein the said sample of host cells have has introduced thereto a plurality of resistance test vectors, each of said resistance test vectors comprising: (1) a patient-derived segment that comprises a HCV gene, and (2) an indicator gene, wherein the expression activity of the indicator gene is dependent upon the patient-derived segment;

    (b)   measuring the expression activity of the indicator genes in the sample of host cells; and

    (c)   comparing the expression activity of the indicator genes measured in (b) to the expression activity of indicator genes measured in a corresponding sample of host cells, cultured in the absence of the HCV anti-viral drug, having introduced thereto a corresponding plurality of resistance test vectors comprising: (1) a patient-derived segment that comprises a HCV gene, and (2) an indicator gene, wherein the expression activity of the indicator gene is dependent upon the patient-derived segment,

    (d)   wherein greater expression activity of the indicator genes in the absence of the HCV anti-viral drug relative to that measured in the presence of the HCV anti-viral drug indicates susceptibility of the viral population of the patient for the HCV anti-viral drug.

113. (Currently Amended) The method of claim 112 wherein the resistance test vector comprises a gene genes encoding C, E1, E2, NS2, NS3, NS4, or NS5.

114. (Previously Presented) The method of claim 112, wherein the patient-derived segment comprises a viral sequence that comprises an internal ribosome entry site.

115. (Currently Amended) A method of determining anti-HCV drug resistance of a HCV viral population in a patient, comprising:

determining susceptibility of the HCV viral population in the patient to said anti-HCV drug by:

(a) culturing a sample of host cells in the presence of said anti-HCV drug, wherein the sample of host cells have has introduced thereto a plurality of resistance test vectors, each of said resistance test vectors comprising: (1) a patient-derived segment that comprises a HCV gene, and (2) an indicator gene, wherein the expression activity of the indicator gene is dependent upon the patient-derived segment; and

(b) measuring expression the activity of the indicator genes in said host cells; and

(c) comparing the activity of said indicator genes susceptibility of the HCV viral population in the patient to said anti-HCV drug determined in step (a) with a standard curve of activity of said indicator genes determined for drug susceptibility for the anti-HCV drug,

wherein susceptibility activity which is decreased relative to that shown by the standard curve indicates anti-HCV drug resistance of the HCV viral population in the patient.

116. (Currently Amended) A method of determining anti-HCV drug resistance of a HCV viral population in a patient, comprising:

(a) determining susceptibility of the HCV viral population in the patient to said anti-HCV drug at a first time point by:

(i) culturing a sample of host cells in the presence of said anti-HCV drug, wherein the sample of host cells has have-introduced thereto a plurality of resistance test vectors, each of said resistance test vectors comprising (1) a patient-derived segment that comprises a HCV gene, and (2) an indicator gene, wherein the expression activity of the indicator gene is dependent upon the patient-derived segment; and

(ii) measuring expression the activity of the indicator genes in said sample of host cells;

(b) determining, by the method of step (a), the susceptibility of the HCV viral population in the patient to said anti-HCV drug at a second time point; and

(c) comparing the susceptibility of the HCV viral population in the patient to said anti-HCV drug at the first time point and the susceptibility of the HCV viral population in the patient to said anti-HCV drug at the second time point, wherein a decrease in susceptibility to said anti-HCV drug at the second time point relative to that at the first time point indicates anti-HCV drug resistance of the HCV viral population in the patient.

117. The method of Claim 112, wherein said patient-derived segment encodes one HCV protein.

118. The method of Claim 112, wherein said patient-derived segment encodes two or more HCV proteins.

119. (New) The method of Claim 112, wherein said patient-derived segment comprises genes that encode NS3 and NS4a.

120. (New) The method of Claim 112, wherein said patient-derived segment comprises a gene that encode NS5b.

121. (New) The method of Claim 112, wherein said indicator gene is luciferase.

122. The method of Claim 115, wherein said patient-derived segment encodes one HCV protein.

123. The method of Claim 115, wherein said patient-derived segment encodes two or more HCV proteins.

124. (New) The method of Claim 115, wherein said patient-derived segment comprises genes that encode NS3 and NS4a.

125. (New) The method of Claim 115, wherein said patient-derived segment comprises a gene that encode NS5b.

126. (New) The method of Claim 115, wherein said indicator gene is luciferase.

127. The method of Claim 116, wherein said patient-derived segment encodes one HCV protein.

128. The method of Claim 116, wherein said patient-derived segment encodes two or more HCV proteins.

129. (New) The method of Claim 116, wherein said patient-derived segment comprises genes that encode NS3 and NS4a.

130. (New) The method of Claim 116, wherein said patient-derived segment comprises a gene that encode NS5b.

131. (New) The method of Claim 116, wherein said indicator gene is luciferase.